

**REMARKS**

Claims 1-5 and 8-12 are pending in this application, with claims 2, 3 and 8-11 having been withdrawn from consideration. By this Amendment, claim 1 has been amended and claim 12 has been added. Claim 1 is independent. Reconsideration of the application is respectfully requested.

**I. Amendment**

Support for the amendment to claim 1 can be found in the specification at, for example, Fig. 2. Support for new claim 12 can be found in the specification at, for example, Fig. 9A. Thus, no new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; and (c) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because e.g. they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

**II. Interview**

The courtesies extended to Applicants' representative by Examiner Kianni at the telephone interview held March 24, 2010, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

As discussed during the interview, the Office Action mischaracterized Applicant's statements. In particular the Office Action asserts that Applicants have admitted that Tatsuya's photo crystal area fraction FF is as high as 0.5. See page 4, lines 1-3 and page 5, lines 10-12 of the Office Action. Also, the Office Action alleges that Applicants made

similar statements on page 5 of the August 14, 2009 Amendment. Applicants strongly disagree with this assertion.

Paragraph [0010] of the specification clearly recites "the construction in Non-Patent Document 1 does not allow the FF value to be equal to or larger than 0.5." This same passage is also recited on page 5 of the August 14, 2009 Amendment.

Applicants respectfully request the Examiner to review these passages of the specification and the August 14, 2009 Amendment and withdraw the assertion.

### **III. The Claims Define Patentable Subject Matter**

The Office Action rejects claims 1, 4 and 5 under 35 U.S.C. §103(a) over Japanese Patent Publication No. 2002-084037 to Tatsuya. This rejection is respectfully traversed.

Independent claim 1 recites, *inter alia*, "a two-dimensional photonic crystal having a slab-shaped body in which modified refractive index areas are cyclically arranged and composed of holes passing through the slab-shaped body." The applied references fail to teach or render obvious the recited features of independent claim 1.

As discussed during the interview, the Office Action relies on the asserted columns of Tatsuya for corresponding with the recited modified refractive index areas. However, the columns are not holes that pass through the substrate. Thus, Tatsuya fails to teach or render obvious a two-dimensional photonic crystal having a slab-shaped body in which modified refractive index areas are cylindrically arranged and composed of holes passing through the slab-shaped body. Accordingly, the applied reference fails to teach or render obvious the recited features of independent claim 1.

Regarding claim 5, Applicants respectfully point out that the recited area fraction FF of the modified refractive index area in the body is a different variable from the recited refractive index of the body of claim 5. Claim 5 explicitly recites two different terms for

these different elements. Applicants respectfully request the Examiner to review claim 5 based on these differences.

The dependent claims are patentable at least due to their dependence on allowable independent claim 1 and for the additional features they recite.

Accordingly, withdrawal of the rejection of the claims is respectfully requested.

**IV. New Claim 12 Is Patentable**

New claim 12 is patentable. As discussed during the interview, new claim 12 is patentable at least due to its dependence on allowable independent claim 1 and for the additional features it recites.

Also, rejoinder and allowance of claims 2, 3 and 8-11 are requested.

**V. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-5 and 8-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Obert H. Chu  
Registration No. 52,744

JAO:OHC/rle

Date: March 29, 2010

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 320850**  
**Alexandria, Virginia 22320-4850**  
**Telephone: (703) 836-6400**

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry of this filing; Charge any fee due to our Deposit Account No. 15-0461</p>
---